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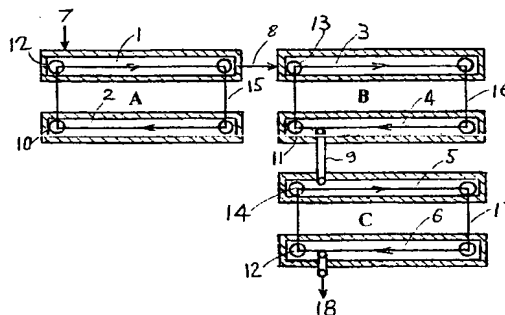
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(54) Title: CONTINUOUS STEELMAKING PLANT



(57) Abstract: The present invention provides a process plant for the production of molten steel from primary and/or secondary ferrous materials in which no free oxygen is permitted to contact directly carbon-containing iron melts, comprising: - i) at least three pairs of furnaces (1,2; 3,4;5,6), each furnace of a pair having a hearth base (36) and being interconnected so as to form a continuous flowpath loop for molten metal, the first pair (1,2) defining an iron making loop (A) and the second and third pair (3,4;5,6) defining primary and secondary steel refining loops (B,C) respectively, (ii) means (8) for transferring molten metal from the ironmaking loop (A) to the first refining loop (B) and from the first refining loop (B) to the second refining loop (C), (iii) means for controllably supplying heat to, and removing heat from metal in the furnaces (1,2,3,4,5,6), whereby, in use a central region of metal (19a) in the furnace (1,2,3,4,5,6) becomes or is maintained in its molten state and a peripheral region of the metal (20) is maintained in a solid state such that the molten metal (19a) is contained within a stable solid shell of metal (20), said solid metal shell (20) defining the walls of the furnace (1,2,3,4,5,6), (iv) for each furnace (1,2,3,4,5,6), a removable lid (23), an enclosed space (25) being defined between the hearth (36), the lid (23) and the solid metal shell (20) defining the walls of the furnace (1,2,3,4,5,6), (v) a lifting arrangement (34,35) for controllably raising out of and lowering into the melt any plant items, so that upon shut down, said items can be removed prior to solidification of the molten metal (19a).

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